a single crystal Si resistor formed over an insulating material layer, electrically coupled between the input pad and the node, wherein the single crystal Si resistor is horizontally isolated by an isolation structure; and

at least a single crystal silicon-sided junction diode without a control gate electrode formed over the insulating material layer, wherein the single crystal silicon-sided junction diode is electrically coupled between one terminal of a corresponding power supply and a node.

9. (Thrice Amended) An ESD protection structure having a single crystal Si-sided diode used to protect an internal circuit formed from an insulating material layer on a SOI, the ESD protection structure electrically connected between an input pad and a node and the internal circuit electrically connected to the node, the ESD protection structure comprising:

an input resistor including a plurality of single resistors formed over the insulating material layer, wherein each of the single resistors is electrically coupled between the input pad and the node, wherein the single crystal resistors is horizontally isolated by an isolation structure therebetween; and

at least a single crystal sided junction diode without a control gate electrode formed over the insulating material layer, wherein the single crystal sided junction diode is electrically coupled between one terminal of a corresponding power supply and a node.

14. (Twice Amended) A semiconductor structure of ESD protection, the ESD protection electrically connects between an input pad and an integrated circuit, the semiconductor structure comprising:

a semiconductor substrate;

an insulating layer, formed on the semiconductor substrate;

at least a single crystal Si resistor, formed over the insulating layer;

at least a single crystal Si-sided junction diode without a control gate electrode, formed over the insulating layer, wherein the single crystal Si-sided junction diode does not includes a MOS transistor serving as a diode;

a first conductive layer, formed over the insulating layer, used to electrically connect one terminal of the single crystal Si resistor and the input;

a second conductive layer, formed over the insulating layer, used to electrically connect another terminal of the single crystal Si resistor and the integrated circuit; and

a third conductive layer, formed over the insulating layer, used to connect the single crystal Si-sided junction diode and the integrated circuit.

21. (Thrice Amended) An ESD protection structure used to protect an internal circuit, the ESD protection structure electrically connected between an input pad and a node and the internal circuit electrically connected to the node, the ESD protection structure comprising:

a single crystal Si resistor formed on an insulating material layer, electrically coupled between the input pad and the node; and

a single crystal layer formed over the insulating material layer, wherein the single crystal layer comprises at least two doped regions with different dopant types to form a side junction diode without a control gate electrode, and the side junction is electrically coupled between one terminal of a corresponding power supply and a node, wherein the side junction diode is not a MOS device that serves a